

CG type

Model		SHA40A										
		50	80	100	120	160	50	80	100	120	160	
Combined driver		HA-800□-6D/E-200 ^{*1}					REL-230-36, REL-230-40 HA-800□-24D/E-200					
Max. torque ^{*2}	Nm	333	548	686	802	841	523	675	738	802	841	
	kgf·m	34.0	55.9	70.0	81.8	85.8	53.4	68.9	75.3	81.8	85.8	
Allowable continuous torque ^{*2,3}	Nm	92	156	196	235	315	157	260	327	382	382	
	kgf·m	9.4	15.9	20.0	24.0	32.1	16.0	26.5	33.3	39	39	
Max. rotational speed ^{*2}	rpm	80	50	40	33.3	25	80	50	40	33.3	25	
Torque constant ^{*2}	Nm/A	25	40	50	60	80	25	40	50	60	80	
	kgf·m/A	2.5	4.1	5.1	6.1	8.2	2.5	4.1	5.1	6.1	8.2	
Max. current ^{*1}	A	18	18	18	17.6	14.3	27.2	22	19.6	18	14.7	
Allowable continuous current ^{*1,2}	A	6.0	6.0	6.0	6.0	6.0	9.0	9.0	9.0	8.8	7.2	
EMF constant	V/(rpm)	2.8	4.5	5.6	6.7	9.0	2.8	4.5	5.6	6.7	9.0	
Phase resistance (20°C)	Ω	0.19										
Phase inductance	mH	1.2										
Inertia moment (without brake)	GD ² /4	kg·m ²	4.8	12	19	27	49	4.8	12	19	27	49
	J	kgf·cm·s ²	49	124	194	280	497	49	124	194	280	497
Inertia moment (with brake)	GD ² /4	kg·m ²	5.8	15	23	33	59	5.8	15	23	33	59
	J	kgf·cm·s ²	59	150	235	338	601	59	150	235	338	601
Reduction ratio		50:1	80:1	100:1	120:1	160:1	50:1	80:1	100:1	120:1	160:1	
Permissible moment load	Nm	849										
	kgf·m	86.6										
Moment stiffness	Nm/rad	179 × 10 ⁴										
	kgf·m/arc min	53.2										
One-way positional accuracy	Sec	40	30	30	30	30	40	30	30	30	30	
Repeatability	Sec	±4										
Bi-directional repeatability	Sec	50	20	20	20	20	50	20	20	20	20	
Encoder type		Magnetic absolute encoder										
Single motor revolution Encoder resolution		2 ¹⁷ (131,072)										
Motor multi revolution count		2 ¹⁶ (65,536)										
Output resolution	Pulse/rev	6,553, 600	10,485, 760	13,107, 200	15,728, 640	20,971, 520	6,553, 600	10,485, 760	13,107, 200	15,728, 640	20,971, 520	
Mass (without brake)	kg	13.0										
Mass (with brake)	kg	13.8										
Environmental conditions		Operating temperature: 0 to 40°C/Storage temperature: -20 to 60°C Operating humidity/storage humidity: 20 to 80%RH (no condensation) Resistance to vibration: 25 m/s ² (frequency: 10 to 400Hz)/Shock resistance: 300 m/s ² *4 No dust, no metal powder, no corrosive gas, no inflammable gas, no oil mist To be used indoors, no direct sunlight Altitude: less than 1,000 m above sea level										
Motor insulation		Insulation resistance: 100MΩ or more (by DC500V insulation tester) Dielectric strength: AC1,500V/1 min Insulation class: A										
Mounting direction		Can be installed in any direction.										
Protection structure		Totally enclosed self-cooled type (IP54)										

The table shows typical output values of actuators.

*1: If a HA-800□-6D/E driver is combined with a SHA40A actuator, the maximum torque and allowable continuous torque are limited.

*2: Typical characteristics when combined (driven by ideal sine wave) with our drivers.

*3: Value after temperature rise and saturation when the 500 x 500 x 25 [mm] aluminum radiation plate is installed.

*4: Value of phase induced voltage constant multiplied by 3.

*5: For testing conditions, refer to [1-12 Shock resistance] (P49) and [1-13 Vibration resistance] (P50).